

CLAIMS

[accepted August 24, 2004 (25/08/04) by International Bureau:claims 1-4 as initially filed have been amended and claims 5-7 have been cancelled (2 pages)]

1. (after amendment) A process of biological cleaning of waste water under pressurization characterized in that, in a biological cleaning method of waste water in which cleaning of waste water is performed biologically by utilizing the biological waste water cleaning function of microorganism bodies by way of an oxidation reaction and/or reduction reaction,

a reactive gas containing oxygen is instantaneously dissolved, in part by means of a line atomizer under pressurization, in advance outside of a reaction vessel to be brought into a dissolved state, the remainder being dispersed and stored in the solution as fine bubbles to form a gasified solution;

the said gasified solution is introduced into the aforementioned reaction vessel so as to feed aerobic microorganisms with reactive gases such as oxygen;

the pressurized condition is maintained in such a way that the decreasing rate of the concentration of the dissolved gas in the gasified liquid introduced into the aforementioned pressurized reaction vessel is reduced; and

the microorganism bodies are rendered to exhibit the cleaning function in the aforementioned pressurized reaction vessel.

2. (after amendment) The process of biological cleaning of waste water under pressurization as described in Claim 1 in which the aforementioned reaction vessel is provided therein with support bodies having functions of increasing the habitat density of the microorganisms, holding the microorganisms and preventing flow-away loss of the microorganisms.

3. (after amendment) The process of biological cleaning of waste water under pressurization as described in Claim 1 in which the degree of the pressurized state in the aforementioned reaction vessel does not exceed the pressure at the outlet of the aforementioned line atomizer.

4. (after amendment) The process of biological cleaning of waste water under pressurization as described in Claim 2 in which the degree of the pressurized state in the aforementioned reaction vessel does not exceed the pressure at the outlet of the aforementioned line atomizer.

5. (cancelled)

6. (cancelled)

7. (cancelled)